

WHAT IS CLAIMED IS:

1. A medical needle shield apparatus comprising:
a needle hub having a needle cannula extending therefrom to a distal end; and
at least one shield being extensible from a retracted position to an extended
5 position to enclose a distal end of the needle,
the shield including a binding member disposed within the shield and defining
binding surfaces that form an aperture configured for slidable receipt of the needle
between the retracted position and the extended position,
the binding member including at least one drag inducing member such that the
10 at least one drag inducing member engages the needle during slidable receipt of the
needle to create a drag force with the needle, the drag force and shield facilitating
rotation of the binding member relative to a longitudinal axis of the needle such that
the binding surfaces engage the needle to prevent slidable movement of the needle in
the extended position of the shield,
15 the binding member further including a needle communicating surface
extending therefrom such that the needle communicating surface is engageable with
the needle to prevent rotation of the binding member,
a retainer for releasable engagement with the needle hub, and
the binding member further including a binding member reset surface
20 selectably alignable with a reset surface.
2. A medical needle shield apparatus as recited in claim 1, wherein the at
least one drag inducing member defines a cavity that is substantially aligned with the
aperture, the cavity being configured for slidable receipt of the needle to create the
drag force with the needle.
- 25 3. A medical needle shield apparatus as recited in claim 1, wherein the
binding member includes a substantially planar aperture plate that includes the
binding surfaces that form the aperture.
4. A medical needle shield apparatus as recited in claim 3, wherein the at
least one drag inducing member includes a pair of arms extending from the aperture
30 plate.

5. A medical needle shield apparatus as recited in claim 3, wherein the arm includes a deflectable member.

6. A medical needle shield apparatus as recited in claim 1, wherein the binding member is rotatable, relative to a longitudinal axis of the inner needle,
5 between a non-binding orientation whereby the inner needle is slidable relative to the binding member and a binding orientation whereby the binding surfaces engage the inner needle to prevent slidable movement of the inner needle in the extended position of the at least one shield.

7. A medical needle shield apparatus as recited in claim 1, wherein the
10 shield includes a housing that defines at least one blocking member extending from a surface thereof, the at least one blocking member being engageable with the binding member for urging the binding member to a binding orientation.

8. A medical needle shield apparatus as recited in claim 3, wherein the shield includes a housing that defines at least one blocking member extending from a
15 surface thereof, the aperture plate being axially movable for engagement with the at least one blocking member that causes rotation of the binding member to a binding orientation.

9. A medical needle shield apparatus as recited in claim 1, wherein the at least one shield is supported for relative rotational movement by at least one bearing.

20 10. A medical needle shield apparatus as recited in claim 1, wherein the needle is attached to a handle for manipulation thereof.

11. A medical needle shield apparatus as recited in claim 1, wherein the needle hub is releasably mountable with a housing of the at least one shield.

12. A medical needle shield apparatus as recited in claim 1, wherein the
25 needle hub defines a hub slot that is configured to receive the retainer of the binding member.

13. A medical needle shield apparatus as recited in claim 1, wherein the binding member includes at least one outwardly arcuate arm that extends to the needle communicating surface.

30 14. A medical needle shield apparatus as recited in claim 1, further comprising a plurality of shields.

15. A medical needle shield apparatus as recited in claim 1, wherein said binding member reset surface comprises the distal facing surface of said retainer.

16. A medical needle shield apparatus as recited in claim 1, wherein said reset surface is configured to deflect said binding member reset surface to facilitate rotation of the binding member relative to said longitudinal axis such that said binding surface disengages the inner needle.

17. A medical needle shield according to claim 1, wherein said medical needle is adapted for bone biopsy.

18. A medical needle shield apparatus as recited in claim 1, wherein said reset surface is separate from said hub and urged by a spring toward said binding member reset surface.

19. A medical needle shield apparatus of claim 18, further comprising a luer male taper configured with said hub.

20. A medical needle shield according to claim 1, further comprising a protective needle sheath member.

21. A medical needle shield apparatus as recited in claim 1, wherein the shield includes a probe guide at a distal end thereof configured for receipt of an obturator, the obturator being configured for slidable movement with the needle cannula.

22. A medical needle shield according to claim 1, further comprising a retention element.

23. A medical needle shield according to claim 1, further comprising a guiding member for guiding through-the-needle devices.

24. A medical needle shield according to claim 1, further comprising a funnel for guiding an obturator.

25. A medical needle shield according to claim 1, further comprising a detent disposed between the needle hub and the shield.

26. A medical needle shield according to claim 1, wherein said shield further comprises a flexible funnel.

27. A medical needle shield according to claim 1, wherein said shield further comprises a depth stop.